



MONTANA AERONAUTICS COMMISSION



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June, 1964

MONTANA STATE FLYING CO-OP PLACES SECOND IN NATIONAL AIR MEET



Proud group of Bozeman Coop members — (Front row— Jim Willoughby, Dan Biggerstaff and President Wayne. Back row—Duane Barr, Steve Erban, Don Bjork and Dan Keil.)

Fifteen university and college teams competed in the two day National Intercollegiate Flying Association's annual meet held in Bozeman May 15 and 16. Oklahoma State won

team championship, Montana State placed second; Western Michigan placed third followed by Ohio University and the University of Minnesota. Montana State's team members

placed in the top five in three of the four major events in addition to winning the team Safety Award. 150 contestants participated, including 17 women, competing in Navigation, Power On and Power Off precision landings, and Bomb Dropping events.

Dan Kirkpatrick of Purdue was elected President for the NIFA for the coming year and Purdue University was selected for the 1965 National Air Meet. Rita Sander of Ohio University was crowned queen of the 1964 Meet by NIFA President Wayne Sand of Valier, Montana.

Judges for all flying events were: Chief Judge, George Holey, Aviation Representative for the Minnesota Department of Aeronautics; Mr. Arthur Kurth, General Aviation Operations Inspector, Helena FAA GADO; Mr. Don Wright, Principal Maintenance Inspector, Billings FAA GADO; J. W. Vickrey, FAA Flight Service Station Chief, Bozeman; James Monger, Assistant Director for the Montana Aeronautics Commission, and Jack Wilson, Montana Aeronautics Commission Safety and Education Officer and coordinator for the air meet.

Entertainment events were also featured during the two days including the Bozeman Sheriff's Posse gave a demonstration Friday noon and that evening the visitors were treated to barbecue by the Montana (Continued on Page 3, Column 1)

Official Monthly Publication
of the
**MONTANA AERONAUTICS
COMMISSION**

Box 1698
Helena, Montana

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DIRECTOR'S COLUMN



Charles A. Lynch

ATTENTION: PILOTS

In recent communications with the Regional Office of the Federal Aviation Agency in Kansas City, Missouri, a number of items pertinent to facilities situated in Montana were brought out and a number of misconceptions clarified.

In relation to previous proposals to decommission 35 airway beacons in the State of Montana, I had previously advised you that under date of January 17, I had received correspondence from FAA indicating that the entire lot of proposals affecting all 35 of the airway beacons had been **withdrawn**. However, in late March we were in receipt of a notice of meeting and agenda for an Informal Airspace Conference to be held in Kansas City on April 22, 1964. As the beacons again appeared in this agenda, it was assumed that the issue was not dead.

I am pleased to advise you now that their entrance into the agenda for that informal airspace conference was in error. The proposals for the decommissioning of these beacons still stands as of January 17, in that they have been completely withdrawn and are, therefore, not up for consideration at this time.

It is therefore suggested that you do not direct any further correspondence to either the FAA or the Congressional Delegation in Washington on the beacon situation in Montana at this time.

We would further like to draw your attention to an experimental facility recently established in the Salmon, Idaho area. As there are relay stations for use by air traffic control in the area, a general aviation frequency has been established whereby voice communication can be relayed through the use of the frequency 125.3 through the Salt Lake City Air-Traffic Control Center to the Salt Lake City Flight Service Station. This will make a voice channel available to the general aviation pilot at medium low altitudes for VFR use on a VHF frequency.

Another experimental area is scheduled to be served in the near future in northwestern Montana. It is proposed to establish the frequency 124.9 megacycles for use in the Kalispell, Whitefish area through the relay station and land lines through the Air Traffic Control Center in Great Falls to the Great Falls Flight Service Station.

The above voice channel will be available to all general aviation pilots on VFR Flight through the **VHF Frequency 124.9 Mc.** Our conversation with the regional office further indicated that progress was being made on the plans to establish a **TVOR** at Flathead County Airport near Kalispell.

It further appears that some progress is being made to establish the use of land lines from a remote receiver in the Glasgow area with the Miles City Flight Service Station.

We are very encouraged by these recent discussions and it does appear that there is a definite awareness of the needs of general aviation operations under VFR conditions.

For this reason we feel that it is a highly important and opportune time for us to establish factually all available information on the traffic potential of certain frequencies in the VHF band and therefore, request that all **Aircraft Owners in Montana** including **Operators and Authorized Dealers** complete the radio and electronics questionnaire shown on the last page of this Newsletter as quickly as possible, forwarding your reply to the Safety and Education Division,

Montana Aeronautics Commission,
P. O. Box 1698, Helena, Montana.

There are presently in excess of 1650 registered aircraft in the State of Montana. It will be necessary to receive 1000 or more answers on this questionnaire.

June 15th Deadline For Aeronautics-Related Trades School Registration

In line with the National movement to provide trade and technical training for all high school and post-high school youth, the Helena Senior High School will provide three courses next fall for Montana students. Electronics, Aircraft Powerplants and Airframes Courses will be open to registration for students from anywhere in Montana.

These are technical-trade classes, meeting for five to six hours each school day. The Department of Aeronautics and Related Trades is designated as an Area Vocational Training Center and students from outlying counties, between the ages of 16 and 21, may enroll and have their tuition paid by their home counties. **APPLICATION must be made by JUNE 15.**

Principal of the Department of Aeronautics, Giles Russell stated that a second year of electronics is planned for the 1965-66 term with emphasis on Aircraft Electronic Instruments.

Contact: Principal, Dept. of Aeronautics & Related Trades
Helena Public Schools
2300 East Poplar, Helena.

"CHECK YOUR TIEDOWNS"

IF YOU WORK FOR A MAN, in Heaven's name WORK for him. If he pays you wages which supply you bread and butter work for him; speak well of him; stand by him and stand by the institution he represents. If put to a pinch, and ounce of loyalty is worth a pound of cleverness. If you must vilify; condemn and eternally disparage — resign your position, and when you are outside, damn to your heart's content, but as long as you are part of the institution do not condemn it. If you do, that you are loosening the tendrils that are holding you to the institution, and at the first high wind that comes along, you will be uprooted and blown away, — and probably will never know the reason why.

NIFA

(Continued from Page 1)

Flying Farmers and Ranchers Association followed by a street dance. On Saturday, Al Newby of Flight Line Inc., Belgrade, put Nelson Story's Great Lakes Trainer through its paces in a demonstration of acrobatics and James Stradley of the Gallatin Flying Service, Belgrade, demonstrated various pilot techniques in a Piper Cub. The final demonstration event was a series of delayed parachute jumps from 14,000 feet by the Treasure State Sky Divers.



1964 NIFA Queen—Rita Sander, Ohio University.

At the Awards Banquet held Saturday evening in the MSC Student Union Building, Jerry Yates was awarded the Best Male Pilot Award and Miss Kim Bailey the Top Woman Pilot Award, both are from the University of Oklahoma. Ray Mertes, director of school and college service for United Air Lines was Master of Ceremonies and Mr. A. W. (Tony) LaVier, director of flight operations for Lockheed and noted test pilot of high performance aircraft was the featured speaker. Mr. LaVier gave a stimulating, slightly humorous, version of his eventful flying career. Mr. Louis G. True, retiring advisor for the MSC group, commented on the pleasure of his association with the Co-op and Dr. Leon H. Johnson, President of MSC, extended his greetings to the contestants and their guests.

An array of beautiful trophies were presented to the 5 top place winners in each major event: Power Off Precision Landings Award, sponsored by Cessna Aircraft Company and pre-



(Left to Right) Tony Levier visits with National Board of Advisors Chairman, Harold Wood; Ray Mertes, Director of School and College Service, and NIFA President Wayne Sand.

sented by Leslie L. Thomason. Power On Precision Landings Award, sponsored by Beech Aircraft Corp. was presented by Miss Lenore Steinbalm; Navigation Contest Award, sponsored by Aero Commander, Inc. was presented by Hoyt E. Walkup, Director, Aviation Department Oklahoma State University; Bomb Dropping Contest Award, sponsored by Piper Aircraft Corp. was presented by Jim Stradley, Gallatin Flying Service. In addition the following special awards were given: Benedix Corporation's Team Championship Award to Oklahoma State by MAC Director, Charles A. Lynch; the Loening Trophy, sponsored by Grover Loening and presented by his son Mike, was awarded to Oklahoma State; Top Woman Pilot Award, sponsored by Arlene Davis was presented by Master of Ceremonies, Mertes; Top Male Pilot Award sponsored by Alpha Eta Rho and AOPA was made by Merrill Roe; Women's Achievement Award, sponsored by the Ninety Nines, Inc. presented to Sally Sloan, Minnesota, was made by Winifred "Pud" Lovelace. First Timer Award was presented to Rocky Mountain College at Billings, by Charles Bowman, new MSC Co-op faculty advisor. Ohio University was presented with the Contestant Miles Award, sponsored by Trans World

Airlines by Ernest Blatchley, advisor for the Purdue University team; Norm Strange presented the Collegiate Aviation Progress Award, sponsored by United Air Lines to St. Cloud State College. Montana State accepted their trophy sponsored by American Airlines from Art Kurth, FAA Helena. The Activities Award, sponsored by the University Aviation Association was presented to Idaho, for the Western Region and Oklahoma State for the Mid-Western Region. The top 25 pilots were presented with their awards by Mr. Harold Wood, Chairman Parks College, St. Louis University and the runner-up contestants among the girls were presented with gifts by Dan McIntyre of Cessna Aircraft Corp. Mr. True was presented with a plaque by the MSC group upon his retiring as their Advisor and President Wayne was presented a gift by the Co-op members.

MAC wishes to congratulate all of the contestants, particularly our own MSC Co-op members and say that the Commission felt it a pleasure to have been given the opportunity to assist the group with this meet. We send a very large "Well Done" to the Co-op for the handling and direction of their undertaking and applaud their officers who worked many hours and many months to

make this 1964 NIFA Meet the success that it was: Wayne Sand, President; Don Bjork, Vice President; Dan Biggerstaff, Secretary; Steve Erban, Treasurer; and Al Koelzer, Publicity Chairman.

"MSO SD" MISSOULA RADAR WEATHER

Ray Granger

**Supervising Radar Meteorologist
Missoula, Montana**

In the past few years a new type of weather report has been appearing on the weather teletypewriter circuits of the northwest for the use of aviation weather briefers and pilots. Here is a sample report:

MSO SD 1510

AREA (||)TRW+/+—320/70 65/40
130/83 225/105 2715 TOPS 270

CELL TRW/NC 295/120 D15 2715

The "SD" report usually appears on the special weather report collection at approximately 20 minutes past the hour. What does the report mean? How is it obtained? How can it be used? These are questions that many pilots could ask. In November, 1961, a WSR-57, 10 cm wave length, 500 KW peak power, weather surveillance radar began operations from the top of Point Six mountain, 7493 ft msl. This was the first weather surveillance radar to be placed on a mountain top and operated remotely by a complex micro-wave link.



PT Six Radar Installation with Johnson Flying Service's Helicopter.

The radar scopes and controls are located in Weather Bureau quarters at Missoula County Airport. Experience has shown that considerable weather is seen by the radar that is not reported by the widely scattered network of weather reporting stations. The radar has helped fill the gap between weather stations.

One of the most important features of this radar is the ability to detect

precipitation of any intensity with only a negligible loss of radar energy in passing through the precipitation area. Because of this the radar will locate precipitation areas at large ranges and can measure the intensity of the precipitation. It is important to note that this radar does not detect clouds but only those droplets which are falling or are large enough to fall if vertical currents do not hold them aloft. With the WSR-57 radar it is possible to determine the areal extent, vertical extent (within 100 nm), and the theoretical rainfall rate of precipitation echoes.

There are some limitations to weather that the radar can detect. Snow fall gives a relatively weak and variable radar return because the crystalline structure of snowflakes scatters radar energy. Winter storms are generally much more shallow than those of spring, summer, and fall. Weather follows the curvature of the earth while the radar beam follows a path that is essentially straight. This results in the radar beam gradually moving further from the surface of the earth with distance so that under normal conditions the base of the radar beam from point six will be approximately 12,000 ft msl at 100 nm and 18,000 ft msl at 150 nm. Wintertime weather will normally have precipitation tops from 10,000 to 15,000 ft msl. Because of this, winter storms are not seen much beyond 100 nm. As the storm becomes colder, the precipitation tops become lower, and the snow has less water content and is more difficult to detect. Snow fall in Arctic storms is difficult to detect beyond 80 nm.

Pacific storms can be detected 130-150 nm away, during the spring and fall, before the radar beam "overshoots" the weather. Upslope weather along the east slopes of the continental divide cannot be detected by the radar because of its low level precipitation. Summer time weather develops to the greatest heights and therefore can be detected at the greatest distances.

Thunderstorms have been detected on the radar beyond 200 nm. From studies conducted last summer it was found that the Point Six radar will detect 80 percent of the thunderstorms out to 150 nm and will locate 41 percent of the thunderstorms be-

yond 150 nm. The thunderstorms not detected within 150 nm are presumed to be small.

The radar observer evaluates and describes types of weather causing radar echoes in the radar weather report. The intensity of radar detected weather is based upon a theoretical rainfall rate. A "very weak" echo would have a rainfall range of less than .01 inches per hour, a "weak" echo a rainfall rate of from .01 to .10 inches per hour, "moderate" echoes would range from .10 to 1 inch per hour, and "strong" echoes would be greater than 1 inch per hour. From the pilot's standpoint, "very weak" echoes should not cause precipitation which would hamper flying under normal conditions. The "weak" echo reports would require closer examination for even though the precipitation amounts themselves may not cause a restriction to visibility, formation of low clouds along the mountains under the precipitation area could cause considerable difficulty for VFR flying. When echoes over any particular area have been classified as "moderate" or "strong" the pilot should carefully check enroute weather and be prepared to circumnavigate the weather in these areas. Convective showers that reach the "moderate" level have been shown to be thunderstorms, according to a study conducted at Missoula, so turbulence and hail could be expected in the vicinity of convective storms of "moderate" or stronger intensity.

Due to the variability in detection of snow, all intensities are reported as unknown. A broken or solid area of snow, as reported in a radar report, should be avoided because of probable visibility restrictions. The "SD" report above explains weather detected by radar and interpreted by the radar observer. The first report can be read as follows: "Broken area of strong thunderstorms with intensity increasing slowly extends from 70 nm northwest of Missoula to 40 nm northeast of Missoula to 83 nm southeast of Missoula to 105 southwest of Missoula. This area is moving from the west at 15 knots and the tops of the precipitation (NOT THE CLOUD TOPS) extend to 27,000 ft msl." The second report tells that "A moderate thunderstorm cell showing no change is located 120 nm west northwest of Missoula. It

has a diameter of 15 nm and is moving from the west at 15 knots." A verbal description of the above radar weather would be broadcast by the FSS on the continuous Transcribed Weather Broadcast of the Missoula homing beacon (308 kc).

Radar reports are available at FSS's or Weather Bureau Offices in the northwest where special radar maps are available for showing pilots the boundaries or locations of radar echoes.

Unfortunately it is not possible to give detailed locations of precipitation areas because the "SD" message would become too long and involved. The best way to get the complete radar picture is to look at the radar scopes and have the observer explain the weather patterns. This is possible if a pilot is at the Missoula County Airport for then he can visit the radar room at the Weather Bureau Office. **PILOTS ARE ENCOURAGED TO DO THIS.**

For pilots not able to see the radar scopes, knowing the boundaries and tops of the precipitation as reported in the teletype SD report, should help in flight planning. When the SD report indicates a scattered area, from one to five-tenths of the area will be covered by the reported weather; a broken area will have from six to nine-tenths coverage by the reported weather, and an overcast or solid area will be more than nine-tenths covered by the reported weather.

There are several things a pilot should remember about radar weather reports: (1) it is not possible to report everything; (2) There are some limitations to the weather a radar can detect; (3) Radar reported tops are the tops of the precipitation (NOT THE CLOUD TOPS); (4) Radar can determine storm intensities. Radar weather reports will supplement other weather reports and provide a picture of the precipitation patterns between widespread weather stations and over large, remote areas from which there are no weather reports.

SAFE PILOT'S GOLDEN RULE

3. **VIGILANCE**—Plan ahead so you never occupy any area on the ground or in the air without "double checking" for possible existing or potential hazards.

AIRPORT NOTES



**By James H. Monger
Assistant Director, Airports
AIRPORTS UNDER
CONSTRUCTION**

Pilots are urged to use extreme caution on the following locations as the airports are being reconstructed as soon as weather permits: Hamilton, Harlowton, Boulder, Whitefish (temporarily closed for seeding).

Pilots are urged **not** to use the following airports until they are completed: These are new airports in new locations and have not yet been officially opened, even though they may look perfect from the air, there is still a contractor working on the ground. These locations are: Yellowstone State Airport, Lincoln and Seeley Lake.

POPLAR—The City of Poplar and Roosevelt County opened bids on May 16 for the reconstruction of the Poplar Airport. This project is estimated to cost \$52,000. The project will consist of paving their existing runway and taxiway and parking apron. The bids are still under advisement by the airport commission.

JORDAN — The Garfield County Commissioners have made an application for a preliminary engineering grant from the Montana Aeronautics Commission to that County. The grant will be used to finance an engineering study to show the proposed improvements on the Jordan Airport. It is expected that Garfield County will be getting a new paved runway in the near future. This project will utilize local and state and federal funds. Jordan is on the National Airport Plan as well as the State Airport Plan.

EKALAKA — The Department of Administration was unable to issue a contract for the construction of the new Ekalaka Airport. This was due to the fact that only one bid was received. The specifications for the Ekalaka job have not been altered

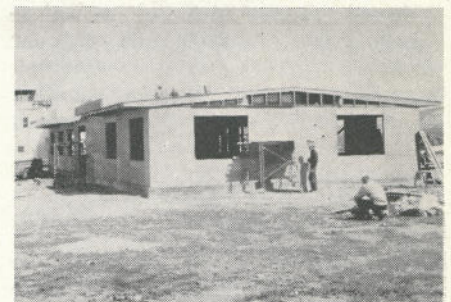
and are now under readvertisement and bids will be opened in the Capitol Building at 10 A.M. on June 17. It is sincerely hoped that two or more bids will be received on this job so that the project can be completed this summer.

PROJECT COMPLETION DATES:
Yellowstone State Airport, October 1, 1964; Yellowstone State Terminal Building, April 15, 1965; Lincoln Airport, August 1, 1964; Seeley Lake Airport, July 1, 1964.

PROJECTS NOW IN PRELIMINARY ENGINEERING STAGE and expected to be in the construction stage this summer are: Richey, Rye-gate, Lavina and Broadus.

Hysham is still under study. The project at Wibaux has been temporarily stopped because of our inability to find suitable property in the immediate vicinity of Wibaux.

CHESTER — The Liberty County Airport Commission has made an application to the MAC for a loan in the amount of \$5,000. This loan was approved on a ten-year repayment basis and will be utilized by Chester in financing of a runway seal coating project and will take place this summer.



HELENA — External construction progress on new Federal Aviation Agency Building. Branches of the FAA to occupy the new building will be: The District Airport Engineer, the GADO and the Systems Maintenance Sector Offices. Construction will be completed September 15, 1964.

Montana Pilot's Association Hangars—Attention

President C. D. Markle remind all MPA Hangars to complete the Officer/Meeting Questionnaire just as soon as possible and forward it to him, — P.O. Drawer 71, Glasgow Montana.

FOR SALE: Maule-96 hrs T.T.—4 place, 150 MPH Cruise, Engine Driven Gyros, Mark V Omni, Cyl head Temp., Manifold pressure and suction gauges, flashing beacon. Price \$9,300.00. Contact: Dr. Alan Fletcher, Box 1028, Poplar, Montana.



CALENDAR

June 7: Gildford, Montana—Montana Flying Farmers Fly-In breakfast at the Henry Wood farm. Pot luck lunch to follow later in the day. (The strip is located 5½ miles N.E. of Gildford.)

June 14: Lewistown—Willy Rimby's Skycraft will hold an Aircraft Auction. The auction will be conducted by Frank Bass, Montana's Flying Auctioneer and will be held at the Lewistown Municipal Airport.

June 15-26: Dillon—Western Montana College of Education Ground Instructors Course.

June 16-July 17: Missoula—Montana State University. Teachers Aero-Space Education Workshop.

June 16: Dillon—Montana Aeronautics Commission monthly meeting.

June 16-July 17: Bozeman—Montana State College. Teachers Aero-Space Education Workshop.

June 19, 20 and 21: Columbus—Centennial Celebration and Fly-In. Free barbeque at noon on Saturday, parade, rodeo, boat and car races.

June 25, 26 and 27: Washington, D.C.—National Aero-Space Education Conference.

June 29-July 17: Dillon. Western Montana College of Education Teachers Aero-Space Education Workshop.

July 11 and 12: Glacier National Park—INAC summer board meeting. Many Glacier Hotel.

July 26, 27 and 28: Pendleton, Oregon—Pendleton Open "100." Stock airplane race.

July 26: Bozeman — General Fly-In and Antique Aircraft Fly-In. Acrobatic Air Show by Al Newby. Parachute jumps by members of the MSC Sky Divers. Plan ahead to attend!

August 1 and 2: Cascade Reservoir Airstrip—20 miles south of McCall, Idaho. 4 State Fly-In, Idaho, Oregon, Washington and Montana.

September 5 and 6: Spokane, Washington — Northwest Aviation Seminar. Hollywood and TV personality, Bob Cummings, will be the guest speaker at the dinner on September 5th. An all-around top-notch program is expected.

September 24, 25 and 26: Helena—INAC Annual Convention.

October 12, 13 and 14: Rapid City, South Dakota. NASAO National meeting.

October 19, 20 and 21: Norman, Oklahoma—National Airports Conference to be held at the University of Oklahoma. This Conference is jointly sponsored by the University and the American Association of Airport Executives.

5 State Civil Air Patrol Units Hold Conference

Civil Air Patrol units from 5 states met at a regional conference in Billings, Friday and Saturday, May 15 and 16. Among the 250 CAP adult leaders were special representatives from:

CAP Headquarters—USAF Representatives

Col. Paul C. Ashworth, Commander; Col. Joe L. Mason, Deputy Commander; Col. Herbert S. Ellis; Lt. Col. Donald B. Guthrie; Maj. Robert G. Crabb; Capt. Billie H. Parker; Lt. Col. Norman J. McConnell (Chaplain); Lt. Col. George G. Weston; Lt. Col. Roger L. Wobbe; Lt. Col. L. H. Garland, Jr.; Capt. Ralph E. Wiloughby and Mr. John V. Sorenson, Director Aerospace Education.

Civil Air Patrol

Col. Paul W. Turner, CAP National Chairman.

CAP—Rocky Mountain Region

Col. John T. Vance, Rocky Mountain Region Commander; Col. Joseph B. Reber, Montana Wing Commander; Col. Joseph S. Bergin, Utah Wing Commander; Col. Eugene L. Isaacs, Wyoming Wing Commander.

USAF—CAP Liaison Officers

Col. William M. Bower, Chief Ln. Officer, RM Region; Lt. Col. Alva E. Nixon, Asst. Chief Ln. Officer, RM Region; Lt. Col. Charles P. Carley, Dir. of Opn., RM Region; Major Jack C. Voelker, USAF; Maj. William Pakkala, Colorado Wing; Maj. Edward H. Butts, Jr., Idaho Wing; Maj. Esra G. Rickman, Jr., Montana Wing; Maj. Leroy F. Phipps, Utah Wing and Capt. Richard W. Bourne, Wyoming Wing.

Guests

Col. Arthur W. Beall, USAF, Central Air Rescue Center; Maj. David J. Kinne, USAF, Western Air Rescue Center.

The morning session commenced

with opening remarks by Montana Wing Commander, Col. Joseph B. Reber of Helena; followed by comments from Col. John T. Vance, Rocky Mountain Region Commander. Col. Reber then introduced Montana Aeronautics Commission Director, Charles A. Lynch, representing Governor Tim Babcock at the conference, who welcomed the group to the conference and to Montana.

Mrs. Glen Gibson was presented with an award for "Meritorious Service" by Col. Ashworth.

Judy Erdman of Rapid City, South Dakota and a student at the University of Wyoming on a CAP scholarship spoke and presented a series of slides on her trip to Northern Rhodesia with Operation Crossroads. Judy is presently preparing herself for service with the Peace Corps.

Mr. William Dorsey, Jr., Los Angeles Aerospace consultant was the main speaker at the noon luncheon. Mr. Dorsey, a law professor at Loyola University in Los Angeles, former aerospace counsel and former consultant to the Pentagon, is presently consultant to the Hughes Aircraft Corp., in California. In his comments Mr. Dorsey pointed out that "a willingness to pledge 'lives, fortune and sacred honor' is as much needed in 1964 as it was in 1776." For an example, Dorsey cited how the Hughes Aircraft Corp. was awarded a contract in high altitude, fixed orbit communications satellite when the corporation had not been active in the communications field. The firm's success on these contracts was accomplished because of individuals with conviction who worked toward a goal they knew was possible.

Saturday afternoon was devoted to staff section workshops and meetings, dealing with various problems of communications, command, information, aerospace education and revisions to the National Air Cadet Program.

FOR SALE: 140-A "O" STOCH, new full red and white paint, XW gear, new interior, everything new or recent. Contact George J. Kozich, 1641 South Ave. W., Missoula, Montana or phone 549-0301.

FOR SALE: Sensenich wood prop 72 C 42 for a 65 H.P. Continental flange shaft engine. Price \$25.00. Contact Melvin O. Risa, Flaxville, Montana.

FOR SALE: Airport Boundary lights, presently located on Harlowton Airport. Contact Ed Mielke, Airport Manager, Harlowton, Montana. Phone 632-5835.

C. D. MARKLE ELECTED MPA PRESIDENT . . . SAMMONS, PILOT OF THE YEAR



Newly elected President Markle and wife Jean arriving for the convention in their 210.

The election of new officers was the main item on the agenda for the Montana Pilot's Association annual convention held in Billings, May 1, 2 and 3.

C. D. Markle of Glasgow took over the President's gavel from Russ Lukens for the forthcoming year. Robert A. Taylor, Chinook, was elected Vice-President and Pearl Magill, Glasgow, Secretary-Treasurer. Directors will be Herb Sammons, Cut Bank; John T. Vance, Helena; Bruce P. Toole, Billings and Don R. Hellinger, Devon.

The balance of the meeting sessions dealt with various issues before the membership and upcoming events for '64/65.

Chet Sammons, Cut Bank, was named Pilot of the Year and presented with an award plaque by John Vance, '63 Pilot of the Year award winner. Chet was recommended for the award based largely on a flying incident which occurred last August on his ranch. After failure of his landing gear, he had a mechanic on the Cut Bank airport make a visual check which verified the damage, Chet made the decision to fly on to Great Falls where complete emergency facilities are available. Making a near perfect one wheel landing with a minimum amount of damage to his aircraft and no injuries to himself or his passenger, Chet displayed

his capable handling of his aircraft and excellence of his judgment.



Pilot of the Year—Chet Sammons

The gala combination of lovely period-type dresses and western garb made it apparent that the Convention theme "Montana Centennial" was enthusiastically observed by the attending pilots and their wives.

MAC extends our congratulations to MPA'S new officers and to Chet.

NOTE: Out going President Lukens was recently transferred by his insurance firm to Seattle, Washing-

ton and the very best wishes of all flying Montanans go with Russ and his family. Russ contributed much to Montana Aviation and aviation events—we will miss him!

THE HELICOPTER AND YOU

Eddie M. Granger

Rotary Wing Aircraft are becoming more prevalent in our Montana skies each year. Because of this, it is imperative that we fixed wing pilots know a few facts about these machines so they may be integrated safely into our Aviation Industry.

In order to live safely with this increasingly popular member to our family, we must understand several points in regards to safety that are different from the fixed wing aircraft to which we are accustomed.

Like other aircraft, we can count on an observed "chopper" to land and take off into the wind as he is affected by the wind to the same degree as our conventional aircraft. By FAA regulations the helicopter pilot is required to stay well clear of the normal traffic pattern so he can be expected to land and depart in what we might consider to be an unconventional pattern. In addition, helicopters will normally fly at 500 feet in their "pattern" so they will be more difficult to see than a conventional aircraft.

The helicopter on the ground starting up or shutting down is a real hazard to the uninformed. Most single rotor helicopter blades can flex to within four feet of the ground while at low RPM. The careful passenger will exit or approach in a correspondingly low crouch. Another point the pilot will appreciate, always approach and exit to the front of the bubble, or cockpit. This will enable the pilot to ascertain that you are well clear of the rotor system and also assure him that you have not placed yourself in a dangerous position near the tail anti-torque rotor.

The rotor wash from a "taxiing" helicopter can reach velocities in excess of 40 MPH, which is more than enough to damage a light plane. Because of this, while your fixed wing aircraft is untied and on the ground, a landing or departing copter should be regarded with caution.

Annual Aviation Mechanic Safety Awards

The annual Aviation Mechanic Safety Awards give recognition TO THE AVIATION MECHANICS MAKING THE OUTSTANDING CONTRIBUTIONS TO AIR SAFETY BY MAINTENANCE PRACTICES. This national effort enables the public to recognize the importance of the mechanic in aviation safety. It also serves to focus the aviation mechanic's attention on the vital safety role he plays in the practice of aviation maintenance.

Fifty awards are made on a state level, one in each state for the general aviation winner. If a winner is located in Puerto Rico or the Virgin Islands, additional awards are made. State general aviation mechanic winners become competitively eligible for FAA regional general aviation awards.

(Air carrier mechanic awards will be selected on a regional basis only, due to the geographic locations of air carrier headquarters.)

The state winner will receive an FAA certificate inscribed with the Agency seal and citations, signed by the Administrator and Regional Director and permanently mounted.

Two guidelines for the selection of winners have been established:

1. For the suggestion of a design or improvement to an aircraft or powerplant or any of its components that led to or resulted in increased reliability and/or safety in aviation.
2. For the suggestion or development of a maintenance and/or inspection procedure that contributed significantly to safety in aviation.

Eligible mechanics may submit their own entry form. In addition, supervisors or other knowledgeable personnel may submit an entry form for an eligible aviation mechanic. Entries should be made on FAA Form 3338, Entry Form—Aviation Mechanic Safety Award, and submitted to the FAA district office having jurisdiction over the geographic area in which the mechanic is employed.

The 1964 awards will be made for calendar year 1963 contributions.

State winners will be selected by September 15 and awards will be presented between October 15 and October 31.

CONGRATULATIONS!



CERTIFICATES ISSUED RECENTLY TO MONTANA FLYERS

Hunter, Frank H.—Helena—Private
 Carson, Daniel F.—Helena—Student
 Turnquist, Nels E.—Helena—Comm.
 Lutz, Stephen D.—Denver, Colorado—Flt. Instructor
 Wyman, William L.—Helena—Rotorcraft-Heli. added to Com. Private on ATR Cert.
 Stohr, Penn R.—Missoula—Comm.
 Bauman, Don B.—Moore—Private
 Read, Stanley G.—Missoula—Student
 Willman, Garland W.—Chinook—Private
 Billman, Roger L.—Missoula—Private
 Halverson, Ernest O.—Missoula—Student
 Nottingham, Bruce A.—Wayne, Pa.—Student
 Brundage, Richard W.—Dillon—Student
 Huebner, Phillip D.—Cut Bank—Student
 Horstman, Gerald R.—Polson—Private
 Chase, Wallace R.—Yakima, Wash.—Private
 Atchison, Robert R.—Malmstrom AFB—Student
 Roemer, John E.—Missoula—Student
 Mattus, Robert J.—Great Falls—Student
 Meador, Lowell A.—Great Falls—Private
 Rice, John S.—Great Falls—Private
 Gibson, James R.—Livingston—Student
 Taylor, John A.—Floweree—Student
 Dunlop, Wm. Eugene—Helena—A/Frame Mech. added to powerplant Mech.
 Allison, Edward K.—Helena—Powerplant Mech. added to A/Frame Mech.
 Bliss, Gerald B.—Power, Montana—DC-3 Lockheed T-33 Instr. added to Com. ASMEI (Mil. Comp.)
 Hanson, Roger Donald—Havre—Student
 Dooling, John S.—Jackson, Montana—Student
 Samsel, Wm. Kent, Jr.—Missoula—Student

Kreig, Frank E.—Philipsburg—Student
 Melton, Dennis D.—Denton—Student
 Becker, Bob O.—Butte—Student
 Lueck, Robert J.—Missoula—Comm.
 Davis, Lawrence P.—Havre—Private
 Robinson, John B.—Great Falls—Private
 LeMieux, David A.—Boulder—Student
 Simpson, Robert C.—Moore—Instr. rating and Instr. Flt. Instr.
 Jacobsen, Robert—Carter—Student
 Brown, Lyle H.—Missoula—Sr. Parachute Rigger back and chest
 Schroeder, Thomas W.—Missoula—Sr. Parachute Rigger back and chest
 Shaw, William Gary—Missoula—Sr. Parachute Rigger back and chest
 O'Brien, John V.—Great Falls—Private
 Barker, Vernon D.—Hart, Michigan—Private
 Koch, Lavanne H.—Helena—Student
 Erban, Steven E.—Mohall, N. Dakota—Private
 Wass, Arlend Carlton—Bozeman—Commercial
 Stradley, David Irvin—Belgrade—Instr. added to Com.
 Baeth, Russell—Martin City—Student
 Day, Wayne C.—Hamilton—Student
 King, Glen C.—Billings—Student
 Beedle, Gale Keith—Missoula—Air frame mech.
 Samsel, William Kent—Missoula—Powerplant Mech.
 Fisher, Herbert B., Jr.—Manhattan—Student
 Gliko, Daniel A.—Belt—Commercial
 Pfeiffer, Anthony P.—Fonda—Student
 Lambert, Andre E.—Alta., Canada—Commercial
 Walker, George A.—Alta., Canada—Commercial
 Smedstad, Harris O.—Great Falls—AMEL added to Private
 Dickin, Delmer G.—Alta., Canada—Comm. and Instrument
 Atherton, Melvin F.—Alta., Canada—Commercial
 Hogenkamp, Allen L.—Great Falls—Student
 Nyquest, Charles T.—Missoula—Sr. Parachute Rigger
 Curtiss, Ronald G. O.—Missoula—Sr. Parachute Rigger
 Hansen, Arthur L.—Missoula—Private

MFF & R ELECT VERNA WOOD 1964 QUEEN

The Montana Flying Farmers and Ranchers Association elected Mrs. Henry (Verna) Wood of Gildford their new 1964 Queen at their 18th annual meeting, May 8 and 9. The meeting and evening banquet were held at the O'Haire Manor on Friday and a tour of the SAGE Center was conducted for the group on Saturday morning.

The Banquet was opened with an Invocation by Mrs. Paul Madge of Milk River, Alberta, Canada. President Erma Hansen welcomed the group to the meeting and special guest to the banquet. President Erma then introduced Mrs. Marion Smith, Mayor of Fort Benton, who was the very able Master of Ceremonies for the evening.

Mayor Smith then presented the Mayor of Great Falls, Mrs. Marian Erdmann. Mayor Erdmann welcomed all to Great Falls and gave a resume of a number of early Montanans. She made particular note of the remarkable youth of the participants of the Lewis and Clark Expedition. The group greatly enjoyed the humorous touch of Mayor Erdmann's comments relative to several well-known early-day Montanans as "Liver Eating" Johnson and others.

Governor Tim Babcock, a member of the Association, spoke briefly on his boyhood days on the ranch and of his fascination with flying, even as a small boy. The Governor commented further on the very important role that aviation now holds in the lives of the modern day rancher/farmer.



Mr. Paul Madge addressing the banquet group.



(Seated) Mayor Marion Smith, Fort Benton; Mayor Marian Erdmann, Great Falls, Mary Jo Janey. (Standing) Chet Severson, Queen Verna, with Cessna Trophy, and Governor Tim Babcock.

Special guest, Paul Madge, Regional Director of the International Flying Farmers from Milk River, Alberta, Canada, spoke and reminded the members that all should attempt to attend the Miami Beach Convention to be held in August.

A number of Canadian guests were introduced, followed by the presenting of the Flying Farmer Queens from past years that were present.

International Queen for 1962, Jackie Slaughter, who recently moved to Billings from New Mexico, expressed her pleasure in being at the banquet and further urged the members to attend the Florida convention.

Mrs. Kay Carefoot, Saskatchewan's Queen, was introduced and her daughters Juanita and Elinor.

Outgoing Queen Scotty Jones then made the official presentation of the Queen's Crown to Mrs. Wood, complete with cape and bouquet. Mr. Chet Severson, Severson Air Activities, Great Falls, presented the new Queen with the Cessna Aircraft trophy. Queen Verna expressed her pleasure and appreciation for her newly acquired honor.

The main speaker for the evening, Mrs. Mary Jo Janey, Supervisor of Aviation Education for the Montana Aeronautics Commission, spoke on the importance of aviation education in the modern world. Mrs. Janey re-



(Seated) Outgoing Queen Scotty Jones and Queen Kay Carefoot, Saskatchewan, Alberta, Canada. (Standing) President Erma Hansen and Lee Mills, Helena's FAA GADO. Lee represented the FAA at the meeting.

marked on the increased interest in these fields and the many changes in concepts and everyday living they have brought about. Mrs. Janey pointed out the responsibility that educators have today in the forming of universal thinking; the need of highly trained engineers and scientists and the top employment ranking of the aircraft industry. Mrs. Janey concluded with an agenda of the teaching procedures of Aviation Education in the elementary grades.

President Hansen closed the evening's festivities with a thanks to

members and guests for the fine turnout. In addition to Mrs. Janey, MAC was represented by Chief Pilot Bill Wyman and Joyce McCutcheon, Assistant Safety and Education Division.

A CASE IN POINT

By Kenneth D. Beyer
Commission Attorney

REPAIR WORK AND THE LOG

A mechanic, with an airframe and power plant rating, performed a top overhaul and installed a defective propeller. The work was not entered in the log because the airplane was not approved as airworthy or approved for return to service. The issue was whether or not Sections 18.20, 18.21, C.A.M. required that the repair work be entered into the log even though not certified.

The hearing examiner decided that the entry of uncertified work was not required by Section 18.20 and found that the mechanic was not in violation. On appeal the decision was reversed by the Civil Aeronautics Board. In its decision the Board stated:

"It is apparent that such an interpretation would seriously undermine the integrity of aircraft log books and other permanent records as reflecting accurately the current status of work performed on an aircraft and its airworthy status."

To this, the Director and the Attorney of the Montana Aeronautics Commission adds a hearty concurrence. The Board pointed out that Part 18 provides for and distinguishes between performance of repair work (18.10) and the approval of repair work. That those authorized to perform and those authorized to approve are not, in all circumstances, the same. Thus where work is performed the log book will show this; and if the work is not approved, the absence of the signature of approval will give notice of that fact as well. (Halaby vs. Light, Docket S. E.—387.

AUTHOR'S NOTE: The history of general aviation shows that airplanes and power plants change hands frequently. Thus an airplane owned by A today, may successively pass through the hands of B, C, D, before E purchases it, all within the period of an annual inspection. Conceivably, B could have repaired motor from

an unairworthy airplane (possibly a wreck) and exchanged it for the existing motor. Unless such repair work is noted in the log of the motor, an unsuspecting A&I man could thus miss a flaw which would only be detectable by completely dismantling the motor and magnafluxing the parts. The labor involved in a complete dismantling and magnafluxing of the parts could add considerable to the cost of an airplane. Since a purchaser does not wish to spend the cost of a major overhaul every-time, he would purchase an airplane, the only protection the purchaser may have is to have all repair work, whether approved or not, entered into the log. Being forewarned, the purchaser is forearmed.

While those engaged in general aviation may not always agree that the FAA regulations are desirable or necessary, Sections 18.10, 18.11, 18.20, 18.21, and 18.22 are regulations which provide real protection for the flying public. For this, the FAA deserves your continued cooperation to see that the repair and log book requirements are always complied with.

YOUTH VIEWS AVIATION

The following stories are the winners in an essay contest held at the Grand Avenue School in Billings. Robert Kaufmann's, Fourth Grade Class and Mrs. Holmgren's Sixth Grade Class.

HOW AVIATION AFFECTS OUR MODERN WORLD

Darrell L. Tunnick Grade 4

Almost half of commercial travel is by air transportation. Jet airliners can carry over 100 passengers at over 600 miles per hour, using the advantages of high altitude flight. In 1960, 721 American cities were served by the airlines. The lines carried nearly 58 million passengers and huge amounts of mail and freight. Nearly 170,000 people are employed by airlines today as compared with 13,000 in 1939.

The United States military aviation utilized approximately 33,000 aircraft in 1960. The Air Force is charged with three major missions in defense of the nation—to defend the United States against air attack, to deliver a counterattack against an aggressor and to give support to the army and navy in their operations. High performance jet bombers and fighters

as well as transports and other aircraft are constantly under development to improve the USAF's capability. Technological advances are adding the guided and ballistic missiles to the Air Force inventory of military weapons.

There are many kinds of flying other than military and scheduled air transportation. There are business flying by private firms, professional men, farmers and ranchers; flight instruction; pleasure flying and other miscellaneous aerial operations. Together these activities are called general aviation which now operates approximately 80,000 aircraft and accounts for almost half of all the hours flown today.

Many of the great explorations, including the North Pole and the South Pole, have been carried out in airplanes.

Aviation helps men to learn more about the world we live in and to find new territories.

Aviation, especially through the use of helicopters can reach many places where there are no roads and railroads to rescue sick or injured people who otherwise would die.

Observation from airplanes can help stop forest fires before they spread enough to become dangerous, direct traffic and prevent traffic jams; report on storms and give warning to people living on shore and to ships at sea; and there are hundreds of other uses.

HOW AVIATION AFFECTS OUR MODERN WORLD

Beth Norris Grade 6

Aviation affects our modern world in many ways.

Transportation by flying has made it possible to move goods and men long distances in a short time and ship many valuable products to faraway countries. Businessmen can fly to different cities and countries in a matter of hours and can get home in the same day or days.

Aircraft has changed research and knowledge by helping us find out more about the world. Aircraft carrying special prospecting equipment helps to discover oil fields and underground deposits of uranium, iron and other minerals.

Flying has increased the knowledge of weather. Small unmanned balloons and rockets carry automatic radio transmitters in the sky to help the weather report be more accurate.

Aircraft helps keep track of storms and they have even changed the weather by sprinkling dry ice on clouds to make rain. Aviation helps in the discovery of new materials, devices, new ways of doing things. Scientific expeditions to far way lands have brought us new sources of raw materials and new knowledge.

Communication by flying "shrinks the world" the people in other countries become more interested in what is happening in the other parts of the world. Flying makes it possible for mail and printed material to be carried to distant places.

Aviation has helped city and national development. Aviation has caused other cities to grow because they are on important air routes. Karachi is the capital of Pakistan, before World War II it had been a small seaport, almost unknown. During the war military airplanes were routed through Karachi. Now it is a leading air terminal.

In Alaska and the Hawaiian Islands it is difficult to build roads and railroads. Aviation is very important at these places.

Aviation helps unite large and thinly populated countries like Canada and Australia into tighter political areas.

Aviation helps farmers to produce bigger and better crops. Airplanes are used to dust and spray crops to kill insects and plant diseases. Rice fields are often seeded from the air. Helicopters are used to stir up the air in orchards to prevent damage from a late spring frost.

Many farmers have their own airplanes for transportation.

Aviation is also used in saving lives, conservation, recreation, and international relations.

(See next month's newsletter for the remaining winners)



FEDERAL AVIATION AGENCY LISTING

	June	July	Aug.	Sept.
Bozeman	11	16	13	17
(Gallatin Field)				
Culbertson	3		5	
Glasgow		23		9
Glendive	10			23
Great Falls	4	9	6	10
(International)				
Havre			4	
Lewistown			26	
Miles City		22		
Missoula	18	23	20	24
Sidney				24

URANIUM?

Did you ever look at the earth from an airplane?

At the great, wide beautiful, wonderful earth?

And the houses.

All the houses.

Everytime you go up there are more houses.

Soon the whole earth will be covered with houses.

Every where houses.

Just houses.

Nothing but houses.

And automobiles.

All the highways will be covered with automobiles.

Solid with automobiles

Specially 'round the rocket bases.

Millions of cars around the rocket bases.

Because somebody will have discovered a new planet.

A planet of solid gold.

Or maybe uranium.

Solid uranium.

And everybody will have rushed to the rocket bases.

To take off for the new planet.

The Uranium Planet.

There won't be nobody left on earth. They'll all be gone to the Uranium Planet.

And all the houses will be left to rot in the sun.

And all the automobiles to rust in the rain.

And the doors in the houses will creak in the highing winds.

And the batteries in the cars will run down.

And the weeds will grow in the roads.

And the roofs on the houses will leak.

And the tires on the cars will go flat.

And the gold in Fort Knox will grow moldy.

But the people won't care.

Nobody ever cares about the earth on a uranium planet.

H. B. S. S.

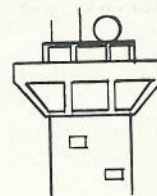
FOR SALE: Ercoupe Model 415-D 85 H.P. Good clean airplane, new rubber, landing lights, nav. lights, L.F. Radio, late type Nose Gear, 215 Hrs. SMOH, excellent condition. Contact George Alex, Townsend, Montana or call 266-4216 after 5 P.M.

FOR SALE: 140 Cessna—or trade on 170. Wing covered in '63. Red and white and polished aluminum. Low freq. radio, 670 SMOH, dual brakes, good glass and interior, 850 by 6 tires. Price \$1,995.00. Contact Dr. J. L. Cromwell, Box 420, Livingston, Montana.

FOR SALE: 1951 Cessna 170A. 775 hrs. SMOH new windshield, battery and upholstery. Well equipped. Contact C. C. Bowman, 909 W Dickerson, Bozeman, Montana.

EUROPEAN TRIP OFFERED TO MPA

Europe in September! \$350.00 will take you to Europe for 3 full weeks with a 2 day stop over in New York to see the World's Fair. KLM Dutch Airlines have offered the Montana Pilots Association members and its associate members the opportunity to make this European trip at a "more than reasonable" price. **FIRM COMMITMENTS ARE NECESSARY IMMEDIATELY!** For further detail or to make your commitment, **CONTACT** — John T. Vance, Montana Club Building, Helena, Montana. Phone 442-7369.



TOWER

OPERATIONS

MONTANA TOWER-CONTROLLED AIRPORT OPERATIONS

	APRIL, 1964	
	Total Operations	Instrument Operations
Great Falls	8107	800
Billings	7396	767
Missoula	5580	227
Helena	2911	146

SAFETY ALERT—MISUSE OF BRAKES

Misuse or excessive use of light aircraft brakes will reduce their reliability and service life.

To maintain effectiveness and reliability, it is suggested that you:

1. Permit aircraft speed to be reduced aero-dynamically before using brakes.

2. Taxi in a manner requiring minimum brake use. Do not "drag" at any time.

3. Do not use brakes while there is a lift on the wings.

4. Apply brakes smoothly with an increase in pressure as necessary for maximum effectiveness.

5. Exercise caution during touch-and-go landing as brakes may become overheated.

REMEMBER: GOOD BRAKES CAN PREVENT ACCIDENTS—CAB

DON'T FORGET—See you in Columbus!! June 20 and 21. Parade, free barbeque, rodeo, street dance, canoe race, Model T race, oldtime picnic. Too Good To Miss!!!

Refer to Director's Column. Page 2.

Aircraft Owners Radio & Electronics Questionnaire

Name

Address

N.#.....or number of aircraft owned.....

#1 Radio Make..... Model.....

Receiving Band.....#Transmitter Channels.....

#2 Radio Make..... Model.....

Receiving Band.....#Transmitter Channels.....

Can you transmit on 122.1..... 123.0.....

124.7..... 124.9..... 125.3.....

125.5..... 126.7.....

Do you have ADF?.....

MEMBER

NATIONAL ASSOCIATION OF STATE AVIATION OFFICIALS

PURPOSE:—"To foster aviation as an industry, as a mode of transportation for persons and property and as an arm of the national defense; to join with the Federal Government and other groups in research, development, and advancement of aviation; to develop uniform aviation laws and regulations; and to otherwise encourage co-operation and mutual aid among the several states."

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